Amendment and Response
Applicant: Nicola Da Dalt
Serial No.: 10/541,049
Filed: February 13, 2006
Docket No. 1435.128.101/12928US
Title: DEVICE AND METHOD FOR FREQUENCY SYNTHESIS

IN THE CLAIMS

Please cancel claims 24 and 40 without prejudice.

Please amend claims 17, 19, 29, and 31 as follows:

1-16.   (Cancelled)

17.   (Currently Amended) A device for frequency synthesis comprising:

an oscillator driven for generating, at a frequency out of a set of at least two possible output frequencies, an output signal; ~~and~~

a control device for driving the oscillator, wherein the control device, for the purpose of generating a desired frequency that is not included in the set of possible output frequencies is configured to drive the oscillator to alternately generate at least two different output frequencies, out of the set of possible output frequencies, such that an average value of the generated output frequencies over a certain time period is ~~substantially~~ the desired frequency plus or minus a relative frequency error, wherein the control device is configured to drive the oscillator such that the at least two generated output frequencies are alternated at an average switching frequency that is less than the at least two possible output frequencies; and

a frequency divider connected to the output of the oscillator and configured to reduce the relative frequency error generated at the average switching frequency.

18.   (Previously Presented) The device of claim 17, wherein the control device is configured to drive the oscillator with a bit stream generated according to a delta-sigma-principle.

19.   (Currently Amended) The device of claim 17, wherein the control device is configured to drive the oscillator such that the at least two generated output frequencies are alternated at an average switching frequency that is greater than the reciprocal value of the certain time period.

20.-21 (Cancelled)

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22.   (Previously Presented) The device of claim 17, wherein the oscillator comprises a digitally controlled oscillator.

23.   (Previously Presented) The device of claim 17, wherein the oscillator comprises a ring oscillator, wherein a current, out of a set of possible currents, can be supplied to the ring oscillator for the purpose of driving the ring oscillator.

24.   (Cancelled)

25.   (Previously Presented) The device of claim 17, wherein the device is of digital design.

26.-28. (Cancelled)

29.   (Currently Amended) A method for frequency synthesis comprising:
        providing an oscillator driven to generate an output signal having an output frequency out of a set of possible output frequencies;
        driving the oscillator for the purpose of generating a desired frequency that is not included in the set of possible output frequencies, in such a way that the oscillator alternately generates at least two different output frequencies, out of the set of possible output frequencies, such that the average value of the at least two generated output frequencies over a certain time period ~~corresponds to~~ is the desired frequency plus or minus a relative frequency error; and
        alternating the at least two generated output frequencies at an average switching frequency that is less than the at least two different output frequencies; and
        dividing the frequency of the output signal generated by the oscillator to reduce the relative frequency error generated at the average switching frequency.

30.   (Previously Presented) The method of claim 29, wherein driving the oscillator comprises driving the
oscillator with a bit stream generated according to a delta-sigma-principle.

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31. (Currently Amended) The method of claim 29, comprising alternating the at least two generated output frequencies at an average switching frequency that is greater than the reciprocal value of the certain time period.

32.–39. (Cancelled)

40. (Cancelled)